

Spot Safety Improvement Program Manual

Utah Department of Transportation
Division of Traffic and Safety



April 2011

1. INTRODUCTION

The Spot Safety Improvement Program (SSIP) is used by the Utah Department of Transportation (UDOT) to fund projects that advance roadway safety goals in Utah.

1.1. SSIP Description

The SSIP provides funding for projects that improve roadway safety. It is similar to the federally funded Highway Safety Improvement Program (HSIP) in its purpose, which is to achieve a significant reduction in traffic fatalities and serious injuries on public roads. The SSIP lends itself well to projects where UDOT crews are used to complete the work because unlike HSIP projects, SSIP projects are not required to be competitively bid. SSIP funds are also used proactively to mitigate potential safety hazards. See the HSIP Manual for more information on this program.

1.2. Purposes of the SSIP Manual

The purposes of this manual are to:

- Define the parameters of the SSIP.
- Define the roles of different parties involved with this program.
- Define and describe SSIP processes.
- Provide readers with a solid understanding of how the SSIP is managed within the state of Utah by UDOT.

The manual is useful for the following audiences:

- UDOT employees and managers involved with SSIP processes.
- UDOT consultants that are contracted to perform functions within SSIP processes.
- General public.

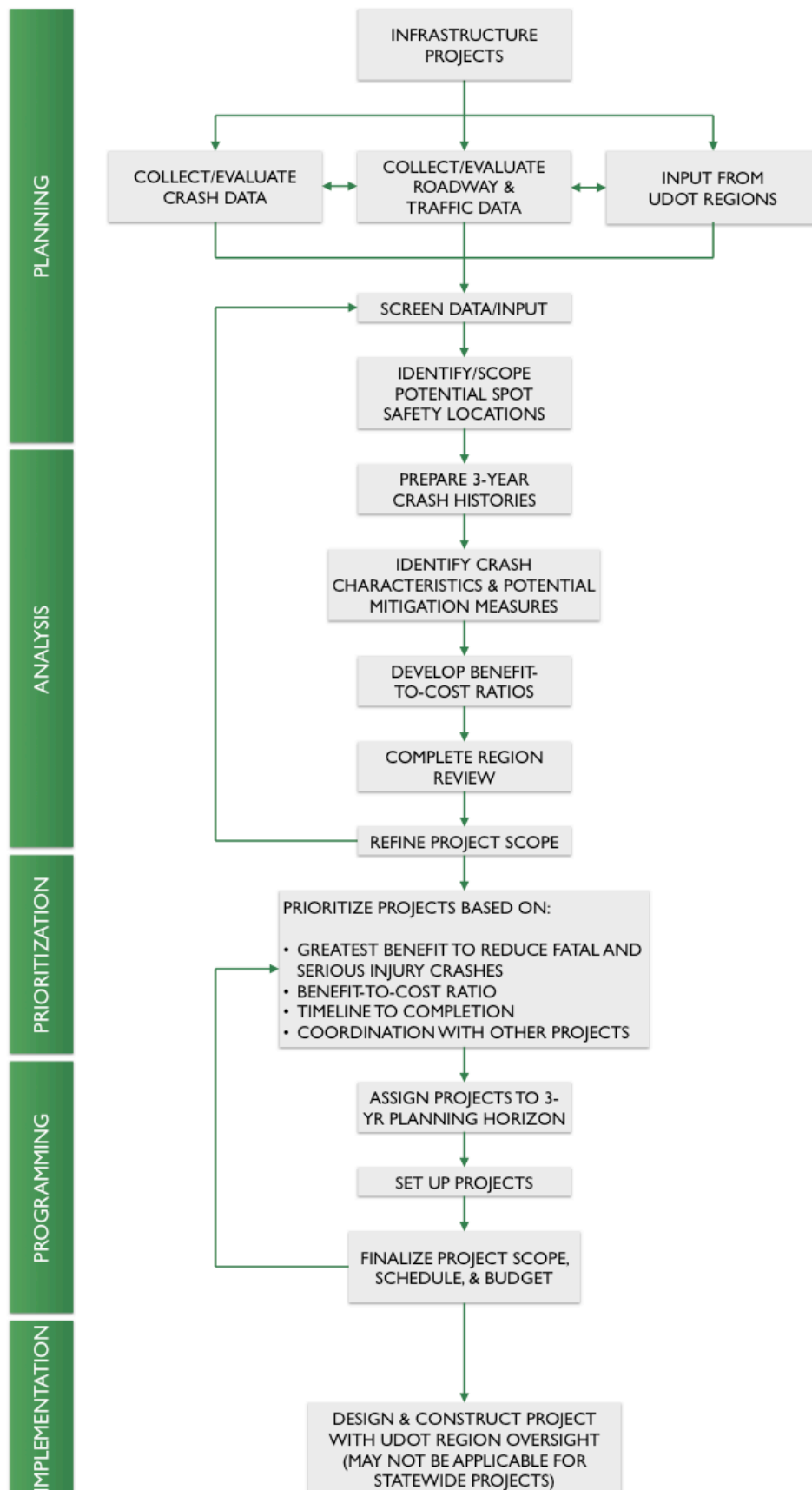
This manual can be downloaded from the UDOT website by going to the following webpage: www.udot.utah.gov/go/ssip.

1.3. Manual Outline

This manual is organized into the chapters listed below. The appendix contains more detailed information about specific elements that readers may be interested in, but which are not included in the main chapters of the manual.

- Chapter 1: Introduction
- Chapter 2: Partners
- Chapter 3: Project Process
- Chapter 4: Appendix

Chapter 3 contains the bulk of the information that will be most useful to readers. A flowchart depicting the SSIP process is shown on the following page.



1.4. Safety Program Information Legal Protections

Under U.S. law (Section 23 USC 409), crash data is protected from use in a court of law. UDOT aggressively exercises its rights to keep crash data and associated SSIP program information out of courts of law. SSIP projects are eligible for federal funding and, therefore, are covered by Section 23 USC 409 protections. This section reads as follows:

Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 [152] of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

1.5. Program Oversight and Funding

Oversight and funding of the SSIP comes entirely from the state of Utah. The UDOT Safety Programs Engineer oversees SSIP activities and sets the necessary policies and procedures. Although SSIP funds can be used for non-infrastructure purposes, they are typically used for infrastructure improvements that are expected to mitigate potential roadway hazards. The SSIP currently provides approximately \$2 million annually for projects.

1.6. Acronyms

Many different acronyms are used throughout this manual. The following is a list of those acronyms and a description of what each of them stands for.

HSIP	Highway Safety Improvement Program
PE	Professional Engineer
PM	Project Manager
PTOE.. ..	Professional Traffic Operations Engineer
SSIP	Spot Safety Improvement Program (State Funded)
UDOT	Utah Department of Transportation

2. PARTNERS

The SSIP is a partnership between the UDOT Traffic & Safety Division, the four UDOT region offices, consultants, and construction contractors. Each partner plays an important role in the success of this program. This chapter describes the roles of these major partners.

2.1. UDOT Traffic & Safety Division

The UDOT Traffic & Safety Division is responsible for the general implementation and oversight of all of UDOT's safety programs, including the SSIP. Division staff perform multiple functions to facilitate the project processes described in Chapter 3.

The Safety Programs Engineer heads the SSIP implementation effort. The contact information for the person in this position at the time of this writing is listed below.

W. Scott Jones, PE, PTOE
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2.2. UDOT Region Offices

The UDOT region offices play a major role in the development and implementation of SSIP projects. They work in concert with the UDOT Traffic & Safety Division to identify potential project locations, submit an SSIP funding application, and participate in the screening and prioritization process. A link to the SSIP application is provided in the appendix (Chapter 4). Once projects are selected and funded in each region, the region offices take ownership of the projects, assign a Project Manager (PMs), and implement them according to standard state environmental, design, and construction processes. Contact information for UDOT's region offices is available on the Internet at <http://www.udot.utah.gov/main/f?p=100:pg:0:::1:T,V:38>.

2.3. Consultants & Contractors

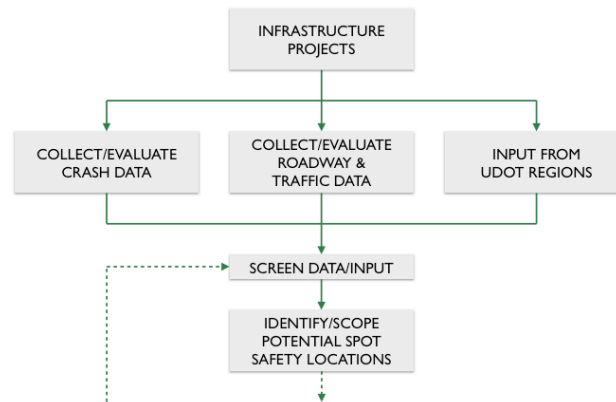
The UDOT Traffic & Safety Division and region offices often contract portions of SSIP projects to consultants and contractors. Since these projects do not involve federal funding, the region offices can elect whether to use their own personnel for design and construction or hire consultants and contractors to perform these functions. Whenever consultants and contractors are used, they are chosen through standard UDOT procurement processes.

3. SSIP PROJECT PROCESS

This chapter discusses the process by which SSIP infrastructure projects are identified, selected, and implemented. The five-step process involves collaboration between the UDOT Traffic & Safety Division and the UDOT region offices to select projects and then move them through to construction. Each of the intermediate steps from planning to implementation is discussed in the following sections.

3.1. Planning

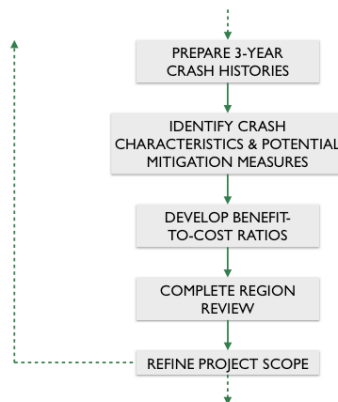
The flowchart below illustrates the activities that are part of the Planning steps of the SSIP project process.



The first steps in the planning process are crash and traffic data collection, crash and traffic data evaluation, and solicitation of input from UDOT region offices. Each region office sends an annual submittal to the Traffic & Safety Division that identifies their priority projects for SSIP funding consideration. The Traffic & Safety Division then screens the crash data, traffic data, and input from the region offices to identify potential spot safety locations. At this stage of the process, the regions do not distinguish whether they would like to ultimately fund each project through the HSIP or SSIP. The Traffic & Safety Division makes this determination at a later stage of the process.

3.2. Analysis

The flowchart on the next page illustrates the activities that are part of the Analysis steps of the SSIP project process.

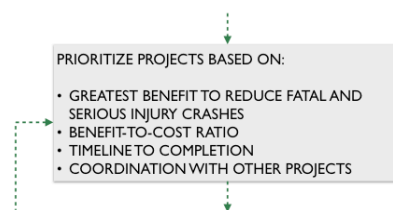


Following the Planning steps, potential spot safety locations are moved forward for a more extended analysis. A three-year crash history is compiled for each candidate location. Crash characteristics are analyzed and potential measures to mitigate those characteristics are identified. Benefit-to-cost ratios are calculated for each location based on the crash history, the expected decrease in crashes for a potential mitigation measure, and the cost of that mitigation measure.

Traffic & Safety Division staff and various region staff review the potential SSIP project locations. At this stage of the process, potential projects may be re-analyzed and the scope of the project may be changed as necessary. The modified project will then go through the aforementioned steps a second time.

3.3. Prioritization

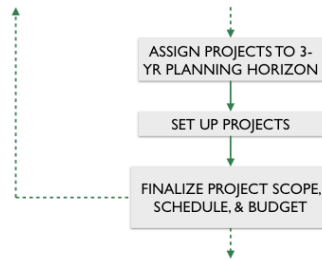
The flowchart below illustrates the activities that are part of the Prioritization steps of the SSIP project process.



Once the Analysis steps are complete, projects that make it through to this stage are prioritized. The prioritization is based on the factors listed in the flowchart and is conducted by the Traffic & Safety Division.

3.4. Programming

The flowchart on the next page illustrates the activities that are part of the Programming steps of the SSIP project process. The Traffic & Safety Division conducts the Programming steps.



Projects that receive sufficient priority to warrant funding are assigned to the three-year planning horizon. A report is compiled for each of the four UDOT regions, showing the SSIP projects that the Traffic & Safety Division has chosen to fund over the following three-year period. Each project is set up in UDOT's system and the scope, schedule, and budget are finalized.

Because this covers a three-year period but is re-evaluated yearly, it is possible for re-prioritization or shifts in funding to occur periodically that may result in modified or new projects with higher priorities taking the place of previously programmed projects. At this stage of the process, projects previously considered for HSIP funding, but which do not have a crash history, may be considered for funding through the SSIP.

3.5. Implementation

The flowchart below illustrates the Implementation step of the SSIP project process.

After projects have been programmed through the Traffic & Safety Division, the region PM shepherds the project through the standard region environmental, design, and construction processes.



4. APPENDIX

The appendix contains more detailed information about specific elements of the SSIP that readers may be interested in, but which do not merit inclusion in the previous portions of the manual. The following list shows the items that can be found in the appendix. Each item is coded as an active electronic link.

- [U.S. Code, Title 23, Section 409 \(safety program information legal protections\)](#)
- [SSIP UDOT Region Application](#)